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EXAMINER

SHIMIZU, MATSUICHIRO

ART UNIT PAPER NUMBER

2635

DATE MAILED: 10/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/265,073

Applicant(s)

OVARD ET AL.

Examiner

Matsuichiro Shimizu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

The examiner acknowledges amended claim 4 and new claims 43-48.

The examiner approves the amended abstract within the range of 50 to 150 words.

Response to Arguments

1. Applicant's arguments filed on 7/23/2002 have been fully considered but they are not persuasive.

2. Regarding applicant's argument (lines 10-19, page 15; lines 8-22, page 17; lines 4-11, page 21; line 18, page 22 to line 7, page 23), the examiner maintains that the interrogators connected to LAN (Fig. 1, an integrator (103) associated with an antenna providing radiation coverage of different area) of MacLellan and the claimed communication stations are remotely located to extend the radiation coverage.

Furthermore, MacLellan and Wood both address the tag identification system, and therefore, they are combinable to teach communication station remotely located to extend the radiation coverage area as claimed in claims 1 and 7.

Regarding applicant's argument (lines 6-14, page 16; lines 8-17, page 23; line 17, page 23 to line 8, page 24), the examiner maintains that since MacLellan and Wood both address the tag identification system, and therefore, they are combinable to teach

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housing and communication station remotely located to extend the radiation coverage area as claimed in claim 1. That is; housing of Wood is equivalently Host computer transmitting forward link signal to interrogator, and furthermore MacLellan teaches remotely located interrogator or remote communication station to extend the identification coverage area.

Regarding applicant's argument (line 14, page 18 to line 2, page 19; lines 18, page 20 to line 3, page 21; line 17, page 23 to line 8, page 24), the examiner maintains Wood teaches driver amplifier for adjusting the power increase as claimed in claim 2. Howelse can the power be increased?

Regarding applicant's argument (lines 3-19, page 19), the examiner maintains that downlink of MacLellan and forwardlink of claim 3 are same. Furthermore, application processor (Fig. 1, 101) of MacLelland initiates inquiry where the interrogator or receiver responds and transmits the inquiry signal to tags via antenna (Fig. 1, 204), and remotely located interrogator of MacLelland and remote communication station are same as disclosed in previous paragraph.

Regarding applicant's argument (lines 1-8, page 20), the examiner maintains that Wood in view of MacLelland and Freeze teaches remote communication station as they are combinable under identification tag system.

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Regarding applicant's argument (lines 9-17, page 20), the examiner maintains that Wood in view of MacLelland and Freeze they are combinable under interrogation system and teach automatic gain control for power control.

Regarding applicant's argument (lines 12-19, page 21; line 17, page 23 to line 8, page 24), the examiner maintains that MacLelland teaches coaxial cable in the LAN system, and furthermore, one skilled in the art recognizes RF spectrum and RFID spectrum of MacLelland are same. Therefore, MacLelland teaches coaxial RF cable.

Regarding applicant's argument (lines 1-9, page 22; lines 9-22, page 24; lines 1-13, page 25), the examiner maintains that Wood in view of MacLelland are combinable under interrogation system, and further Wood discloses transceivers associated with antennas (Fig. 3, transmitter (303) and receiver comprising demodulator (312), filter, mixer (308) and low noise amp (307)).

Therefore, rejection of claims 1-48 follows:

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 6-13, 16-22, 24-24, 27-29, 33-37, 41-42, 43-45 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood, Jr. (5,842,118) in view of MacLellan et al. (5,649,296).

Regarding claim 1, Wood discloses an interrogator of a wireless communication system (col. 3, lines 53-60, wireless communication system) comprising: an interrogator (col. 5, lines 25-27, the host computer acting as a master or interrogator) including: a housing (col. 5, lines 34-38, common housing) including circuitry configured to generate a forward link communication signal (col. 5, lines 30-33 and

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lines 45–47, forward link command (or function) generated at the host computer acting as master or interrogator); communication circuitry configured to communicate the forward link communication signal (Fig. 5, col. 12, lines 28–44, RF circuitry) and to radiate a forward link wireless signal corresponding to the forward link communication signal (Fig. 5, col. 12, lines 28–44, antennas – X1 and X2); and a remote communication device (col. 3, lines 53 to col. 4, line 16, device or transponder (16)). But Wood does not disclose a communication station remotely located with respect to the housing.

However, MacLellan discloses, in the art of tag identification system, a communication station remotely located with respect to the housing (Fig. 1, interrogator (103) remotely connected via LAN (102)) to extend the range of communication with the tag or transponder. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a communication station remotely located with respect to the housing in the device of Wood as evidenced by MacLellan because Wood suggests power adjustment to communicate the remote device (col. 6, lines 30–42, power adjustable) and MacLellan teaches a communication station to communicate the remote device to extend the range of communication.

greater range via

Regarding claim 2, Wood continues, as disclosed in claim 1, to disclose a driver amplifier to increase the power of the forward link communication signal (Fig. 7, preamplifier (79); col. 6, lines 30–42, power adjustable).

Regarding claim 3, Wood continues, as disclosed in claim 1, to disclose the communication station including the adjustment of an electrical characteristic of the forward link communication signal (Fig. 7, preamplifier (79); col. 6, lines 30–42, power adjustable).

All subject matters except a power amplifier in claim 6 are disclosed in claims 1 and 3. However, Wood discloses a power amplifier (Wood–Fig. 7, preampmlifier (79)), and therefore, rejections of all subject matters expressed in claim 6 are met by references and associated arguments applied to rejections of claims 1 and 3, and the above disclosure of Wood.

Regarding claim 7, Wood continues, as claimed in claim 6, to disclose communication station is including an antenna to receive and radiate (Fig. 1, col. 5, lines 53–61, the device 12 as a cellular telephone associated base stations or communication stations or interrogators).

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Regarding claim 8, Wood continues, as disclosed in claim 1, to disclose a radio frequency identification device (col. 4, lines 19–26, RF identification badge).

All subject matters except a coaxial RF cable in claim 9 are disclosed in claims 1 and 3. However, MacLellan discloses, in the art of interrogator system, a coaxial RF cable associated with communication station (Fig. 1, LAN (102) associated with coaxial cable passing rf frequency signal) to extend the range of communication with the tag or transponder. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a coaxial RF cable in the device of Wood as evidenced by MacLellan because Wood suggests power adjustment to communicate the remote device (col. 6, lines 30–42, power adjustable) and MacLellan teaches a coaxial RF cable associated with communication station to extend the range of communication. Therefore, rejections of all subject matters expressed in claim 7 are met by references and associated arguments applied to rejections of claims 1 and 3, and the above disclosure of MacLellan.

Regarding claim 10, Wood continues, as disclosed in claim 1, to disclose a plurality of transceivers (Fig. 7, col. 13, lines 8–33, a diversity switch provides a plurality of transceivers).

All subject matters in claims 11–13 and 16–20 are disclosed in claims 1–3 and 6–10 and therefore, rejections of all subject matters expressed in claims 11–13 and 16–20 are met by references and associated arguments applied to rejections of claims 1–3 and 6–10.

Regarding claim 21, Wood discloses an interrogator of a wireless communication system (col. 3, lines 53–60, wireless communication system) comprising: a housing (col. 5, lines 34–38, common housing) including circuitry configured to generate a forward link communication signal (col. 5, lines 30–33 and lines 45–47, forward link command (or function) generated at the host computer acting as master or interrogator). But Wood does not disclose a plurality of forward link communication signals and a plurality of communication stations remotely located with respect to the housing.

However, MacLellan discloses, in the art of tag identification system, a plurality of forward link communication signals and a plurality of communication stations remotely located with respect to the housing (Fig. 1, interrogators (103) (or remote stations); multiple signals on interrogators) remotely connected via LAN (102)) to extend the range of communication with the tags or transponders. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to

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include a plurality of forward link communication signals and a plurality of communication stations remotely located with respect to the housing in the device of Wood as evidenced by MacLellan because Wood suggests power adjustment to communicate the remote device (col. 6, lines 30–42, power adjustable) and MacLellan teaches a plurality of forward link communication signals and a plurality of communication stations remotely located with respect to the housing to extend the range of communication with the tags or transponders.

All subject matters in claim 22 and 25 are disclosed in claims 7 and 21 and therefore, rejections of all subject matters expressed in claims 22 and 25 are met by references and associated arguments applied to rejections of claims 7 and 21.

Regarding claim 24, Wood discloses an interrogator of a wireless communication system (col. 3, lines 53–60, wireless communication system). But Wood is silent on communication circuit configured to communicate one forward link communication signal intermediate the housing and communication station.

However, MacLellan discloses, in the art of tag identification system, communication circuit configured to communicate one forward link communication signal intermediate the housing and communication station (Fig. 1, LAN (102) circuit is analogous to intermediate communication circuit) to extend the range of

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communication with the tags or transponders. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include communication circuit configured to communicate one forward link communication signal intermediate the housing and communication station in the device of Wood as evidenced by MacLellan because Wood suggests power adjustment to communicate the remote device (col. 6, lines 30–42, power adjustable) and MacLellan teaches communication circuit configured to communicate one forward link communication signal intermediate the housing and communication station to extend the range of communication with the tags or transponders.

Claims 27–29 and 33–34 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 1–3, 6 and 8. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 1–3, 6 and 8 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in Claims 27–29 and 33–34 are met by the references and associated arguments as set

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forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in Claims 27-29 and 33-34 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 1-3, 6 and 8.

Claims 35-37 and 41 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 11-13 and 16. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 11-13 and 16 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in Claims 35-37 and 41 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in Claims 35-37 and 41 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 11-13 and 16.

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Claim 42 recites a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 11, 21 and 25. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 11, 21 and 25 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in claim 42 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claim 42 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 11, 21 and 25.

All subject matters in claims 43-45 and 47-48 are disclosed in claims 1, 11, 21, 27 and 35 therefore, rejections of all subject matters expressed in claims 43-45 and 47-48 are met by references and associated arguments applied to rejections of claims 1, 11, 21, 27 and 35.

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4. Claims 4-5, 14-15, 23, 26, 30-32, 38-40 and 46 are rejected under 35

U.S.C. 103(a) as being unpatentable over Wood in view of MacLellan as applied to claim

3 above, and further in view of Freeze et al. (6,313,737).

Regarding claim 4, Wood continues, as disclosed in claim 3, to disclose the adjustment of electrical characteristics. But Wood in view of MacLellan does not disclose the adjustment circuitry comprises automatic gain control circuitry (col. 13, lines 52-56, AGCs).

*See
comment
in last
draft*

However, Freeze discloses, in the art of interrogation system, the adjustment circuitry comprises automatic gain control circuitry (col. 11, lines 55-61, AGCs in the integrator to transmit proximity values) whereby the integrator transmits proximity values. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include the adjustment circuitry comprises automatic gain control circuitry in the device of Wood in view of MacLellan as evidenced by Freeze because Wood in view of MacLellan suggests the adjustment of electrical characteristics and Freeze teaches the adjustment circuitry comprises automatic gain control circuitry whereby the integrator transmits proximity values and provides power control.

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Regarding claim 5, Freeze continues, as disclosed in claim 4, to disclose the automatic gain control circuitry is configured to monitor the power and adjust the power (col. 7, lines 34-44 and col. 11, lines 55-61, AGC functioning to adjust the power level to the normalized level).

All subject matters in claims 14 are disclosed in claims 1 and 4 and therefore, rejections of all subject matters expressed in claims 14 are met by references and associated arguments applied to rejections of claims 1 and 4.

All subject matters in claims 15 are disclosed in claims 1 and 4-5 and therefore, rejections of all subject matters expressed in claims 15 are met by references and associated arguments applied to rejections of claims 1 and 4-5.

All subject matters in claim 23 are disclosed in claims 4 and 22 and therefore, rejections of all subject matters expressed in claim 23 are met by references and associated arguments applied to rejections of claims 4 and 22.

All subject matters in claims 26 are disclosed in claims 1-2 and 4-8 and therefore, rejections of all subject matters expressed in claims 26 are met by references and associated arguments applied to rejections of claims 1-2 and 4-8.

Claims 30-32 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a

Fig. 6A
Disclosed
or Inferred
rejection

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wireless communication system of claims 1 and 4-5. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 1 and 4-5 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in Claims 30-32 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in Claims 30-32 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 1 and 4-5.

Claims 38-40 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 14-15. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 14-15 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in

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Claims 38–40 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in Claims 38–40 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 14–15.

All subject matters in claim 46 are disclosed in claim 26 and therefore, rejections of all subject matters expressed in claim 46 are met by references and associated arguments applied to rejections of claim 26.

Conclusion

3. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matsuichiro Shimizu whose telephone number is (703) 306-5841. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Micheal Horabik, can be reached on (703-305-4704). The fax phone number for the organization where this application or proceeding is assigned is (703-305-3988).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703-305-8576).

Matuichiro Shimizu



September 18, 2002

MICHAEL HORABIK
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